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Chair

Mr. James Maloney

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● (1105)

[*English*]

The Chair (Mr. James Maloney (Etobicoke—Lakeshore, Lib.)): Good morning, everybody. Thank you for joining us today.

We're going to get under way with the second meeting in our new study on forest pests.

We have two witnesses this morning.

From the University of British Columbia, by video conference, we have Professor Carroll, who I hope can hear us and see us.

Also with us today is Peter Henry, from the Ontario Ministry of Natural Resources and Forestry.

I appreciate both of you making the effort to be here. The process is that each of you will be given up to 10 minutes to make a presentation to the committee in either official language.

On that note, Mr. Henry, you're here, so why don't we start with you? The floor is yours.

Mr. Peter Henry (Manager, Forest Guides and Silviculture, Policy Division, Ontario Ministry of Natural Resources and Forestry): Good morning, everyone.

My name is Peter Henry. I'm the manager of the forest guides and silviculture section of the Ontario Ministry of Natural Resources and Forestry. I'm pleased to speak to you on behalf of the ministry in regard to Ontario's forest pest management.

Ontario certainly shares your interest in the protection of our forests in order to ensure that they continue to provide all of the benefits to society and the environment. We are blessed with a large forested landscape that we rely upon to provide economic and ecological benefits to the province, the forest sector and everyone who benefits from having the forest.

The forest sector for Ontario contributes over $15.3 billion to our provincial economy, and 150,000 direct and indirect jobs. Sustainability of the forest sector is critical to the sustainability of a huge number of communities within the province and to the well-being of the province.

Ontario is concerned about changing populations of native forest pests, such as the Jack pine budworm and spruce budworm. We are currently experiencing a Jack pine budworm infestation that has increased in size sixfold over the last year. There is about to be some public consultation happening in Ontario related to a potential pest control program for that insect, so it is very top of mind.

There were also impacts noted from past spruce budworm outbreaks in Ontario, related to the fire situation this summer. Those of you who live in Ontario have probably heard a lot about the fires. Some of that was exacerbated by past spruce budworm damage.

Finally, we're concerned about forest pests that are not yet here in Ontario. You're going to be hearing about the mountain pine beetle. We are definitely concerned about the mountain pine beetle and its potential move eastward across the country. I've been taking a number of steps, which I'll talk about.

Now I'll provide a little overview of our legislative and policy framework related to pest management, the role of science in our pest management program, and the role of partnerships.

We recognize that native insects and diseases play important ecological roles in Ontario's forests. For example, they help renew the forest by creating conditions for regrowth. Disturbance is essential for the well-being of our forests. They also provide lots of food resources for things such as birds, like warblers. When there are outbreak conditions, there are other species that benefit from that. Our policy framework recognizes the positive roles of forest pests. As well, it addresses the need to limit damage by pests.

Our framework provides for the sustainability of our Crown forests. We have the Crown Forest Sustainability Act as our key piece of legislation. The principles of that act are to conserve large, healthy, diverse and productive Crown forests, and to provide for the long-term health and vigour of Crown forests. Our pest management program works to achieve these principles, and by doing so, contributes to the sustainability of our forests.

Ontario is also impacted by invasive forest pests that are not native to Ontario's forests. Invasive pests can pose immediate and serious threats to our forests because they often arrive with no natural enemies and our trees have not adapted defence mechanisms to fight those invasive species. In 2015, Ontario passed the Invasive Species Act to enhance our ability to deal with the threats posed by invasive species.

Our forest pest management program includes structured monitoring and reporting to detect and document forest pests and their damage across the landscape; science support to ensure that we have the best available information and techniques, such as survey techniques, pest diagnostics, management options and pesticide research, and a robust public planning system for pest control programs. If a pest outbreak occurs, we consider control actions and there is a public planning process associated with that before any actions can take place.

Our pest program relies entirely on science. Science provides us with methods to detect pests and forecast population trends, and that's important to support management decisions for actions. We rely on science to develop and evaluate management techniques—how to respond to pests. That might be research into pesticides, silviculture techniques to respond to pests, or effective controls to prevent the movement of pests.

● (1110)

Ontario supports science activities with a range of partners, including the Canadian Forest Service, other provinces, states and academia. For example, we've been participating in a five-year Natural Sciences and Engineering Research Council project entitled "Turning risk into action for the mountain pine beetle epidemic". Ontario felt it was important to be involved in and support that project in order to address the risk of the eastward movement of the mountain pine beetle. As the mountain pine beetle moves from lodgepole pine into Jack pine forest, potentially as it moves east, the dynamics of that pest may be different.

We've been active in looking at what potential mechanisms might be going on when it moves into new hosts. We've taken material out west to see if it's susceptible. We're taking logs of our Ontario white pine out west to test whether mountain pine beetle will populate and reproduce in that. It's definitely a concern for us and we're taking active steps.

Partnerships are important because forest pests don't recognize provincial or jurisdictional boundaries, and that's certainly a challenge we face with invasive pests. There are certain federal responsibilities under the Canadian Food Inspection Agency for those invasive forest pests. Native pests are under other people's jurisdictions, so we're working on those native pests. Something that falls in the cracks is mountain pine beetle, which we would say is not native to Ontario, but it's native to other parts of Canada. For CFIA, that is a native pest, and for us in Ontario, it's not a native pest. That will be a challenge.

On the positive side, when we have pest issues that we're dealing with, everybody comes to the table to try to address those issues.

Partnerships are certainly an efficient way to support science and deliver forest pest management activities. Through partnerships, we raise awareness about forest pests and their impacts. We improve our ability to detect forest pests. We coordinate actions across jurisdictional lines. In working together, we're hopefully more effective in our controls and responses.

Partnerships help to improve our scientific understanding of pest-host relationships, leading to improvements in risk assessment, which pests we should we be worrying about and when, and our monitoring and resource protection methods. We have active partnerships with quite a wide range of groups, but I'll give a couple of examples. One is the Canadian Food Inspection Agency. There's a critical plant pest management working group that operates in Ontario with those provincial and federal agencies that intersect in their needs. Forest pests are what we're looking at.

There is the Canadian Council of Forest Ministers' forest pest working group, and another is the Pest Management Regulatory Agency. We work with them in terms of potential pesticides for use in forestry.

We also have a partnership with the Canadian Forest Service. We happen to have the benefit in Sault Ste. Marie of the Great Lakes Forestry Centre just down the road, and it's right next to the Ontario Forest Research Institute. There's a lot of collaboration that happens across the parking lot on pest-related issues.

As I mentioned earlier, for the mountain pine beetle project that we partnered in, there were 13 agencies, four provinces and states, the federal government, and five universities, all trying to further our understanding of mountain pine beetle and what it might do, or how its biology might change as it moves eastward. That's really important for us, because we're quite concerned about the threat of that particular pest moving east.

Of course, one of our strongest partners in pest management, the on-the-ground activities, is the forest industry. They are out on a daily basis in the forest. They are often the first ones to be there. They're there every day to detect if something is different or if there's some damage there that they weren't expecting. They're basically the ones who often flag some of those initial issues. They're out there actively engaged in managing the forests for the people of Ontario, in our context, and their observations and insights are important for early detection and effective response activities. As we go into a planning process, they are definitely key partners in any of the activities.

I have a couple of conclusions for your consideration.

Continued support and coordination of agencies that are involved in pest management activities or impacted by pests is required to ensure that our detection and monitoring efforts are successful so that we can detect these things at a time when we can respond with some management actions.

Continued support for the development of management tools is essential so that there are effective and efficient tools available to address forest pest problems and to reduce their impacts on the forest sector.

● (1115)

Lastly, continued support for the infrastructure required to develop pest risk assessments for both native and non-native pests is essential to ensure that we're able to appropriately address those risks and pests accordingly.

That's a key challenge certainly for the non-native pests as we need to do a lot of work in terms of what risk they might pose to the forest, because we've never experienced them before. It's unknown with a lot of these pests what impacts they might have, but the infrastructure associated with doing science-based pest risk assessments is important for us to develop management actions and respond to those things.

Thank you.

The Chair: Thank you very much.

Professor Carroll.

Professor Allan Carroll (Professor, Department of Forest and Conservation Sciences, University of British Columbia, As an Individual): Thank you very much.

I'd just like to take a few moments to outline the role that climate and climate change is playing in forest disturbances and make some special references to the mountain pine beetle, moving forward.

As Mr. Henry points out, natural disturbance is a part of forest ecosystems and indeed an integral part of forest ecosystems, and it can affect thousands to millions of hectares of Canadian forests annually. What tends to be counterintuitive to most people, however, is that the impacts in Canadian forests caused by insects actually tend to be much greater than those associated with fire. As I said, this is counterintuitive largely because, of course, fire gains so much attention in the media.

What we found is that insects cause the mortality of trees over a much greater area than fire does annually, and of course the synergies that this can play with subsequent fires is of prime concern, especially given the impacts in British Columbia over the past year with fuel loading quite likely from the mountain pine beetle outbreak that has been impacting the province for the last couple of decades.

There's evidence that disturbance from insects in forests is actually getting worse, and in fact, since about 1980, roughly 50 million hectares or more of western North America have suffered some level of mortality caused by bark beetles, of which mountain pine beetle is an example.

The question that brings forth, and one that I focus on as well as colleagues of mine—the few of us who do work on these issues—is whether climate change will exacerbate these impacts into the future.

As you might expect, this is a very difficult question to get into, but we can actually gain some lessons and insights from studies that have occurred from deep time, from millions of years in the past. Recent evidence shows, based upon fossilized evidence of insect disturbance in forests, that as temperatures warm so will that disturbance increase. We have every expectation, as our climate continues to change, that we will suffer increasing levels of insect mortality or insect disturbance across Canadian forests.

To that end, evidence is actually emerging, too, that we do have bourgeoning evidence that the mountain pine beetle, the spruce beetle and indeed the western spruce budworm in western Canada have all been affected by a warming environment. In fact, we continue to work on that as we focus further and further on the issue.

There are two primary ways in which a warming environment can affect forest disturbances. These are not mutually exclusive, but the first is that for a range-limited species, a warming environment can actually create new habitat and allow that species to move into areas that it couldn't previously occupy. The mountain pine beetle is the best example of that sort of issue.

The second is for species that are ubiquitous. In other words, they occur everywhere their host trees occur. Examples of this could be the eastern spruce budworm, or the spruce beetle, for that matter. In this particular case, we are noticing that, in a warming environment, the outbreaks themselves that are associated with these species tend to be getting worse in terms of their frequency, their severity and their duration. To this end, we have the spruce beetle in Yukon and northern British Columbia as a very good example in that particular case.

I mentioned that I was going to focus a bit on the mountain pine beetle, and I know it is an important issue and it's one that I've worked on extensively. Indeed Mr. Henry referred to the TRIA-Net. I'm actually a principal investigator and a theme leader in that particular network.

The mountain pine beetle is perhaps the first and best example of climate-related impacts in terms of forest disturbances in Canada.

It's important to point out that it's a problem that actually has arisen as a consequence of a couple of things. The first and foremost is our success at fire suppression across the west. We have become very good at putting out fires across Canada and particularly in British Columbia, to the extent that we have removed fire—aside from this past couple of years—almost entirely from the pine-dominated ecosystems. This has actually caused an increase in the amount of older trees, which would be the preferable food source for the mountain pine beetle.

In doing so, in the absence of climate change, we created a smorgasbord for the mountain pine beetle and have effectively allowed the populations to build to unprecedented levels.

● (1120)

On top of that, the second driver of this big outbreak has been a warming environment. This has allowed the beetles to survive better. It has allowed them to expand their range, as I mentioned earlier. This range has expanded to the point where the beetles have breached the Rocky Mountains and have begun to spread across Alberta.

In fact, in the 10 or more years since it's been on the eastern side of the Rockies, it has continued to spread across Alberta and we now have it right on the border of Saskatchewan. Indeed in the Cold Lake air weapons range, we have a population detected already. It's quite a concern.

Given the work that I have done with colleagues associated with the TRIA-Net, the NSERC-sponsored program in which I was involved, we can pretty much conclude that as long as populations remain in the outbreak phase—in other words, they remain large and they remain aggressive—eastward expansion remains highly likely. Beetles in that particular phase are capable of finding and successfully attacking Jack pine trees without too much of a problem.

The difference, though, is that if the populations are able to collapse, if we are able to slow the spread to the point where beetle populations actually return to a sub-outbreak or endemic state, then spread becomes much less likely. Indeed, some emerging evidence from my lab shows that persistence in the long run in these new pine habitats by sub-outbreak populations of the mountain pine beetle is actually highly unlikely, as a consequence of competition from other aspects of those forests.

The last point I'd like to emphasize is that the Government of Alberta has actually devoted a great deal of resources, roughly half a billion dollars, to slowing the spread of the mountain pine beetle in the last 10 or 12 years, certainly since 2006.

I recently completed a study, funded in part by the Government of Alberta, looking at whether these efforts have been effective. We can conclude that, yes, indeed, they have been effective. The efforts on the part of Alberta have slowed the spread of the mountain pine beetle significantly. This is a highly important point, especially in combination with the point I made just a moment ago in terms of the collapse of populations back to the endemic level. If we can continue to focus on the mountain pine beetle in efforts to slow its spread, then we might get lucky enough to have these populations finally collapse to this sub-outbreak phase and, in doing so, essentially reduce the likelihood of eastward spread by a considerable amount.

Finally, I'd just like to conclude by saying that you might recall that I mentioned that the mountain pine beetle is perhaps the first and best example of a climate change impact. However, it's only one of a whole series of species that are likely to respond to a warming environment by increasing their disturbances in Canadian forests. We effectively have a canary in the coal mine in so far as future disturbances are likely to occur associated with other species.

Thank you very much.

● (1125)

The Chair: Thanks, Professor Carroll.

Mr. Hehr, you're going to start us off.

Hon. Kent Hehr (Calgary Centre, Lib.): Thank you, Mr. Chair.

Thank you both for your presentations.

My question is for Dr. Carroll. I represent Calgary Centre, so I'm very familiar with the pine beetle and its devastation in Alberta over the course of the last 15 years. You've indicated that you see that it's moving toward the Saskatchewan border. I note that you said that some of the intervention strategies worked in Alberta.

Should we be replicating some of those in Saskatchewan and Ontario as preventive measures to try to deal with the spread at this time?

Prof. Allan Carroll: In short, the answer to that would be yes.

It's worth pointing out that the efforts on the part of Alberta to this point have primarily focused on attempting to kill beetles directly and, in doing so, reduce the population. It's those efforts that have shown an impact of slowing the spread. That said, Alberta has what it calls its healthy pine strategy, where they've been attempting to focus more on harvesting mature pine and reintroducing a variability on the landscape, the same as you would expect with a normal fire regime. Saskatchewan has to some degree also moved along these lines.

It's worth pointing out that the Government of Saskatchewan actually has been aiding Alberta in its efforts at slowing the spread of the mountain pine beetle.

The longer answer would be that, indeed, anything that can be done to reduce forest susceptibility along the eastern margins of the mountain pine beetle spread would be a highly valuable exercise.

Hon. Kent Hehr: I also noted in your presentation that you were saying fire suppression has played a role in allowing the spread of bugs and pine beetles.

Have we started to alter our fire suppression and how we're going about doing this as national and provincial governments look more deeply into this issue?

Prof. Allan Carroll: It's certainly an issue that we're considering. Have we altered our practices? Not yet. We don't have the capacity to do so in an effective manner at this point in time.

The problem that we've reached—the stage at which we currently exist—is effectively the product of many decades of effective fire suppression, so it's not something that can be reversed overnight. Indeed, the impacts that the mountain pine beetle has had on British Columbia, by causing all of that mortality over roughly 16-million hectares of the pine-dominated forests, has actually caused fuel loading in these forests that in all likelihood has severely exacerbated the fires of the past two summers, although the data for that statement is still emerging.

As we proceed further east and begin to look back at British Columbia, any jurisdiction that currently manages pine—or any forest, for that matter—needs to start considering the demographics of those forests as it pertains to susceptibility to insects. If it's out of skew from what you would expect from a historical fire regime, then there is a high likelihood that it will become very good food for insects moving forward.

Hon. Kent Hehr: I was also noting that you were researching past outbreaks, going back into the glacial record and as climate has changed in the past.

Were you seeing in that research evidence of pine beetle, and those types of larva occurring in our past geological record? Is any of that research playing a part in what we're doing today?

Prof. Allan Carroll: We do have evidence of mountain pine beetle activity that goes back over 8,000 years in western North America. That evidence is primarily based upon fossilized bits of insects collected from lakes. All that can really tell us is that the beetles were there, and we can only assume they were doing then what they are doing today.

The other reference I was making was to studies that have looked at fossilized evidence of other types of insect disturbance from as much as 56 million years ago, during a time when we had a climate change event that was similar in rate and severity as what we're expecting today. In that particular case, there was a significant increase in forest-like disturbances back in those times as well.

● (1130)

Hon. Kent Hehr: My last question is for both of you.

Can you identify gaps where the federal government could be aiding in helping to control or study forest pests?

Prof. Allan Carroll: I can take a stab at that, and perhaps Mr. Henry can follow.

I was a Canadian Forest Service scientist until eight or nine years ago, after which I moved to the University of British Columbia. I have some familiarity with the federal government and its structure in terms of forest research.

Indeed, there is a paucity of people who do the type of research that I do. I think that sort of statement is also applicable to scientists who study fire, for example, as well.

There is every expectation that as the climate changes and the environment warms, that disturbance in general—whether it be from insects or fire—is going to get worse. I think we're ill-prepared, from the point of view of the research that we do—our capacity, at least—across the country, whether it be academia or government, to provide the answers we need to effectively adapt to these changes.

Hon. Kent Hehr: Okay.

Mr. Peter Henry: I support those comments, but I'm also thinking about the development of management approaches that might be effective at a landscape scale. What British Columbia and Alberta have experienced, this is millions of hectares. It's not like you can go out and harvest all the old trees before the beetles get there. You cannot do that scale of activity, so there's thinking about the kinds of activities that can be done in concert to address the landscape-scale series of disturbance events that are coming.

I think on the mountain pine beetle there's lot of work that has been done in terms of detection, and it's one of those species that when it's there killing a tree, you can see that. Alberta very successfully was hunting for it and cutting down and killing those beetles. For us in Ontario we're thinking about further research in how the dynamics of the species might change when it moves into our forest. We're concerned about our white and red pine forest, which the beetle hasn't gotten to yet, and what exactly it's going to do there. We're not sure, but it's those dynamics with a new ecology, a new ecosystem, when it moves in there. There needs to be further research on that as well as, I would say, going back to management techniques. We do have some control over some of our fire management actions.

Ontario does have a fire management strategy, and it's not fight every fire everywhere. However, you start to layer on other resource values and things such as if you happen to be trying to manage for caribou habitat, which requires older forests. That's a direction that tells you to maintain older trees out there and perhaps more of those, which are those susceptible trees that Professor Carroll was talking about. You're creating more of that.

We're trying to balance those with the needs of the forest industry. For the fire management people, they're trying to protect value. Around communities, they're trying to put those fires out actively. I think it's about the combination of activities that might take place that can reflect or consider those other values that we're trying to achieve in the forest—

The Chair: I'm going to have to ask you wrap up at the end of this.

Mr. Peter Henry: —with some specific management actions that we can implement at a reasonable scale.

The Chair: Thank you.

Hon. Kent Hehr: Thank you.

The Chair: Mr. Eglinski.

Mr. Jim Eglinski (Yellowhead, CPC): I'd like to start off first by thanking both of our guests today, Mr. Henry and Professor Carroll. I think I've spoken to you before from my riding of Yellowhead. I'd like to thank you for the work that you've been doing.

But first of all, I'd like to thank this committee for taking this study on. Since I've been elected, one of my biggest pushes in the House of Commons, when asking questions, is that we have to get something done with the pine beetle.

My riding of Yellowhead is at the eastern entrance of Jasper National Park. We've watched the pine beetle come in from the west side. I've been working with Professor Carroll and the University of British Columbia and many agencies, such as the CFS, to try to fight them.

To give you an idea how bad it's getting, folks, as Professor Carroll said, we were keeping them at bay in 2013, 2014 and 2015. We were keeping them at bay with West Fraser, the corporation, spending a lot of its own resources, and the Province of British Columbia, of course, the forestry department, fighting to hold the trees at bay, cutting down the ones that were infected. In 2017, there was a tenfold increase in the number of trees reported. That's how fast they are adapting and why I think it's so urgent that the government needs to react.

My first question is for Mr. Carroll.

What can government...and I'm not talking about the provincial governments. We know what the Province of B.C. did. They have spent millions and billions of dollars trying to combat it. We know that the Province of Alberta is spending as much money as they can in their budget each year to combat it. You're a former CFS scientist. Do you feel there's a role that the federal government has to take beyond leaving it under the control of the provinces?

I know we do the research and that's great, but we need to look at combatting it and stopping it.

● (1135)

Prof. Allan Carroll: Yes. It's worth pointing out that the federal government in previous iterations has actually expended a great deal of money towards the mountain pine beetle, but that hasn't actually been consistent in recent years.

Mr. Jim Eglinski: No.

Prof. Allan Carroll: That said, yes, there is a significant role. The beetle has crossed from B.C. to Alberta and now threatens to cross from Alberta to Saskatchewan. I do know that the Government of Alberta has begun dropping very significant hints that their level of commitment to the problem can't continue at the rate that it's been continuing for the past 10 or 12 years, at roughly 30-odd million dollars per year. They're suggesting that they need to pull away.

This to me is highly concerning simply because, as I indicated, we do have significant evidence for effective spread control or slowing the spread on the part of the efforts of the Alberta government. In my opinion, if we weren't to keep up the pressure on the beetle, the potential for us to cause the populations to collapse and effectively remove its ability to spread will be severely compromised if we pull away from these efforts, if Alberta can't keep it up.

From the point of view of the role of the federal government, that might be perhaps the most obvious one.

Mr. Jim Eglinski: Thank you.

You've been involved with the pine beetle for a long time, I think going back to the late seventies.

The pine beetle is adapting. It's adapting very quickly to the changing environment. I remember, in 2003 when I was the mayor of Fort St. John, being told that I was on the northern B.C. pine beetle task force, and being told that the pine beetle would never cross the Rocky Mountains. That was the science of the day.

Can you give us some examples of how they've adapted? I believe even the strain we have coming through Jasper right now is a combination of the southern pine beetle from Alberta and the northern one getting together and amalgamating there.

Prof. Allan Carroll: With all due respect, the issues that suggests are a bit of a red herring. The mountain pine beetle is incredibly good at what it does and there is lots of variation in the populations.

I do know of the work you're referring to, and I am a bit concerned that it suggests that we have this sort of evolving scary Frankenbeetle that is going to cause a lot of issues. It's a fascinating scientific question—believe me—and I think the work that was done was laudable. It was very good, but from the perspective of management, I don't think it's all that relevant, simply because the beetles will attack and kill trees. They will do so as long as the trees are available to them and the climate allows them to persist.

Whether we've had changes in what those things actually are, from the point of view of the beetle, I think is somewhat immaterial because older pine trees are at risk. Older pine trees that are stressed due to drought and other conditions are at higher risk, and where beetles can persist through the winter, trees are at higher risk still. Those three things together, effectively, have been coming to a head, not only in your area but all the way across the boreal and sub-boreal area toward Saskatchewan.

Mr. Jim Eglinski: I'm sorry I'm leaving you out, sir, but the only thing I can tell you is that the pine beetle is coming, so get prepared.

Mr. Peter Henry: I'm hoping this work will help slow that down.

Mr. Jim Eglinski: I've watched it move across the province.

Mr. Carroll, Parks Canada's guiding principles and operating policies state that:

> National park ecosystems will be managed with minimal interference to natural processes.

We constantly hear that the pine beetle is a natural process, but there is a following sentence there that reads:

> However, active management may be allowed when the structure or function of an ecosystem has been seriously altered and manipulation is the only possible alternative available to restore ecological integrity.

I am bringing this question up because you're probably aware that, if you drive from the west side of Jasper National Park to the east side, you will see it is brown. It is not green anymore, folks; it is brown. I can give you letters from two or three different people. The town of Jasper is in a panic situation for fire. The residents are panicking. The visitations are down because of the brownness of our park, yet we're not seeing any action being taken to stop the pine beetle within the park. It has moved through the park. We've watched it over the last seven or eight years, and now it's out the gate and it's spreading through western Alberta.

Do you believe action needs to be taken and that there could be more action taken?

I'm putting you in a tight spot.

● (1140)

Prof. Allan Carroll: Yes. It's a complex question, and you and I have discussed this in the past. What I will do here is be as brief as possible.

Mr. Henry alluded to some of the problems with the mountain pine beetle in terms of what it is. Is it invasive, or is it native? In the context of Jasper National Park, all scientific evidence suggests that it's invasive, in which case it's not a natural disturbance agent.

Banff treated it the very same way and it was very effective about 10 years ago, in terms of slowing the spread down into the Bow River valley.

Mr. Jim Eglinski: Yes, they did it.

Prof. Allan Carroll: Insofar as what to do now, Jasper really no longer has a mountain pine beetle problem. It has a dead tree problem. The mountain pine beetle is now an issue of Hinton, and in fact it's now in the Sundre FMA, if you hadn't heard.

Mr. Jim Eglinski: Yes, it is.

Prof. Allan Carroll: Effectively, Jasper has a problem with dead trees and a high fire risk. Should they be doing something? Absolutely. They do have a community that they need to protect, and I believe they are doing work to actually protect that community with FireSmart applications.

The Chair: Thanks very much.

Mr. Cannings.

Mr. Richard Cannings (South Okanagan—West Kootenay, NDP): Thank you both for being here. I have about 50 questions and time for maybe three or so. With again apologies to Mr. Henry, I'm going to start with Dr. Carroll.

I'm from British Columbia and the pine beetle is the big issue there in our forests. I'm from the Okanagan valley, so I've been on the edge of it, but I watched with some trepidation as that infestation moved south in 2006-07, in big flights off the Cariboo Plateau into the Thompson valley.

You just mentioned that Jasper has a dead tree problem. In British Columbia, that's mainly where we're at. It seems the really huge epidemic of the mountain pine beetle has calmed down a fair bit. In looking to the future and what roles government might have.... Mr. Henry also touched on this, so I'd let him comment at the end. What should we be doing about harvesting strategies, silviculture techniques, to reduce the chance of this happening again?

There was a historical aspect to this, as well as climate, where we had a lot of fires back 200 years ago, so we had these huge monocultures, even-age stands of old pines that contributed to it. Now we're in a replanting phase. I know the Government of B.C. is trying to replant some things, and it's behind in that scheduling. What I'm seeing is that we need more forest diversity in terms of species, structure, and age structure. Is that being done? Is that what you're seeing being done on the ground in British Columbia, that they're replanting different species?

That brings in climate as well. I've seen predictive maps of what the forests of B.C. will look like 100 years from now, and you have ponderosa pines in Vanderhoof.

It's a big question, but what are the sorts of things we should be doing for the future to reduce the chances of these really devastating epidemics of mountain pine beetle and other forest pests?

● (1145)

Prof. Allan Carroll: Your question is another complex one, and I'll do my best to be brief.

It's worth pointing out that the fire suppression activities came on the heels of significant disturbance, which essentially removed fire from the forest and produced a very old, contiguous pine smorgasbord for the mountain pine beetle. Indeed, some of the research I did a while back showed that we had about three and a half times as much mature pine on the landscape at the start of the outbreak as we had 100 years previously. That speaks directly to this lack of diversity, as you've mentioned.

The problem we have with these extensive mortality efforts at salvaging, which, of course, can't keep up with the number of dead trees and the fires on top of all of that, means that our hands are tied in terms of the amount of area that we can actually influence through harvesting. Remember, we are mandated in Canada across the board, as well as in British Columbia, that we replace what we remove from the forest so that we can remain sustainable in terms of our harvesting activities.

That actually is a problem as far as our reforestation activities are concerned, because lodgepole pine remains the favourite species by most companies and the most eligible species to be replaced over most of these areas. As a consequence, it is being put back, and arguably not appropriately in many of these areas that are currently being harvested, to the extent that we do run the risk of having this problem occur again in, say, 60 to 80 years.

Should we be diversifying? Yes, and that diversification is not just in terms of tree species, because we need to keep in mind what sites might look like in the future versus what they look like today. We also need to diversify in terms of the structure of our forests.

One interesting conclusion we drew from our analysis of the demographics of pine prior to the outbreak was that if we were to remove fire from the system, we needed to increase the amount of clear-cutting. In effect, and this is a hard thing to say to most people, we didn't cut enough pine prior to the outbreak. Had we done so, we would have had a more diverse landscape from the point of view of at least its age-class structure and a much lesser likelihood of a sustained, large outbreak of mountain pine beetle.

Mr. Richard Cannings: On that last point, about needing to cut more pine, would it have been better had we been cutting pine in a different way over the last 50 years, and instead of clear-cutting, doing more thinning as is done in ponderosa pine and Douglas fir forests, where you take out a lot of the old trees but plant smaller trees?

The big, old trees that are left there are healthier. They're not competing as much with the other trees for the water. The pheromone trails are disrupted. I've heard that this is one of the harvesting techniques that would have improved it, not more clear-cutting but cutting in a different way.

Prof. Allan Carroll: Absolutely. In places where lodgepole pine would have been mixed with other species, and today where it is currently mixed with other species, I would highly recommend that you remove the lodgepole and let the other species dominate the site.

In other areas, where lodgepole pine is uniform—which is a massive area, the Chilcotin plateau being almost uniformly lodgepole pine, at least historically—it's a different thing. In that particular case, those trees and that ecosystem is fire-adapted and is dependent upon fire to be renewed periodically.

The problem we have is that, through clear-cut harvesting, we can't quite emulate the pattern of disturbance of fire, because we cut with cut-blocks that are limited to 50 hectares in size, with certain adjacency rules that typically create a little checkerboard pattern. You've seen this if you've flown from Kelowna to Vancouver. It is a very susceptible landscape to the spread of disturbance, whether it be insects or fire.

Historically, fire would have burned predominantly small patches, but the occasional large patch of perhaps 10,000 hectares would have been burned. Unfortunately, I don't think we could convince the public that a 10,000 hectare clear-cut would be the wisest ecological choice.

The Chair: That's all your time, unfortunately.

Mr. Richard Cannings: I had about 20 more questions for both of you.

Thank you.

The Chair: Ms. Damoff, you have the floor.

● (1150)

Ms. Pam Damoff (Oakville North—Burlington, Lib.): Thank you, Chair.

When I heard what you were studying, I was quite excited. I'm going to switch gears, though, and talk about the urban forest.

I was on Oakville town council for five years. The council in Oakville has done a lot of work around the urban forest. The tree canopy there is 27.8%, with two million trees, and the structural value is over $1 billion. That's only one municipality.

While I was on council, we were dealing with the emerald ash borer. Because of climate change, extreme weather events, and things such as the emerald ash borer, the Asian longhorned beetle, which is the next thing that may be coming, and a number of other pests that are invasive species, municipalities are left holding the bag. I know Oakville was spending over $25 million to try to deal with the emerald ash borer. We had a strategy, but Burlington was doing it differently, London was doing it differently, and as you said, Mr. Henry, bugs don't know borders.

One of my concerns is that, for something such as the emerald ash borer, my understanding is that the research came predominantly from the United States. We didn't have enough research here in Canada on the emerald ash borer to be able to deal with it properly. Do you see a role for the federal government in enhanced research on these invasive species?

Mr. Carroll, I see you shaking your head. I'll start with you.

Prof. Allan Carroll: The bulk of the research largely has been driven by the U.S., but quite a few of my Canadian Forest Service colleagues and others in academia do work directly with the U.S. scientists as well. In a sense, the science isn't respecting the borders either in that regard. There is a fairly significant effort on the way. Could there be more done? Absolutely, there's no question about it.

The emerald ash borer is a particularly nasty invasive species. At this point in time, colleagues tell me that we could lose the entire genus *Fraxinus* in North America, which is striking. The last time we had something nearly as bad as this was with the chestnut blight about 100 years ago.

There are significant issues, not only from the point of view of urban forestry but forestry in general, in regard to the impacts of the emerald ash borer. Effective management of the emerald ash borer remains elusive. We have yet to really develop a way that we can deal with it. Just that very statement alone indicates that additional research is desperate for new solutions.

Ms. Pam Damoff: One of the things that apparently has happened in Oakville is that the European buckthorn has taken hold, which is another invasive species. Because the ash trees are gone, the light can now get into the forest, so the largest growth in tree canopy in Oakville between 2005 and 2015 was the European buckthorn.

We have no strategy to deal with that whatsoever, and there's no assistance for municipalities to be able to deal with that. It's a cascade of events when you're dealing with the loss of the ash trees and then you have something else taking hold.

Prof. Allan Carroll: Absolutely. Ecosystems are not static and they respond to inputs of disturbance constantly. That's just how they work, and if there happens to be another species capable of exploiting the resources that the one species under threat has given up, they will exploit it for sure.

Ms. Pam Damoff: My understanding is that the Asian longhorned beetle is the next one we're watching in Ontario. Oakville is participating in the monitoring of it. That's being done by the federal government.

Their experience in Oakville with the emerald ash borer is that the federal government comes in, watches for it, says it's there, and then leaves. It's left with the municipality, which has limited resources for research and dealing with it.

Mr. Henry, could you comment on the Asian longhorned beetle and the impact of that?

Mr. Peter Henry: I can. That is one of the pests that the Canadian Food Inspection Agency is dealing with. Ontario is contributing quite a bit in terms of supporting all the monitoring.

It was detected near Pearson International Airport, suspected to have come in in packing materials that were not suitably treated. There was an infestation identified, thousands of trees were cut out of that area, and then there was a series of five years' worth of surveys to try to determine whether we got them all. Subsequent to that, there was another find, so we're back into another series of monitoring exercises.

One of the challenges that gets highlighted with the invasive species—and I'm thinking about research from the U.S. for emerald ash borer or from other places for Asian longhorned beetle—is that we don't know what insect might show up on our doorstep, so we can't do the research ahead of time.

The Canadian Forest Service did some fantastic work associated with one of the most effective pesticide treatments for emerald ash borer, which is being implemented in Oakville and other municipalities, and that is TreeAzin. That was developed at the Great Lakes Forestry Centre and is being used to treat street trees.

Another issue you're highlighting is that in the urban environment trees are very valuable. Management techniques are totally different from when we're out in the forest. The urban environment is a disturbed environment already, so when you take out those trees, as you indicated with buckthorn, you have a new invasive species that will come in and take over. That is probably a more prevalent issue than in the natural forest situation, because there are other species that would jump into that situation.

● (1155)

Ms. Pam Damoff: One of the things that was really obvious when we were treating emerald ash borer is that Quebec had a program that was province-wide and Ontario did not. I'm not even suggesting that it should fall to the provinces, because it needs to be national.

I understand you don't have any role to play for the municipalities in terms of treating the trees. Is that correct?

Mr. Peter Henry: Correct.

Ms. Pam Damoff: Then it's really left to each. Depending where you are, in Quebec it's provincial and in Ontario it's municipal. There's no standard across the country to deal with these invasive species.

The recovery from this is generational. This isn't something we'll get over in a short amount of time. Is that right?

Mr. Peter Henry: Yes. If you've lost your 80-year-old trees, it's 80 years before you have another 80-year-old tree.

Ms. Pam Damoff: Thank you.

The Chair: Unfortunately, we never have enough time, but I want to thank you both for taking the time to join us today. It has been very helpful.

We will suspend briefly and then start the next hour.

● ——————————— (Pause) ———————————

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● (1200)

The Chair: We're going to get under way. We have two witnesses joining us in the second hour.

We have Mr. Bélanger from Forest Products Association of Canada and Mr. Briand from West Fraser by video conference.

I understand Mr. Briand has a PowerPoint presentation that he's provided. At this point it's in English only. It's going to be translated, but if we have consent from everybody around the table, we can proceed with the English only for now on the understanding that the French will come later. It was a last-minute thing. Otherwise we wouldn't do it. All right, that's fine. Thank you.

The process is that each of you will be given the floor for a presentation of up to 10 minutes. You're welcome to do it in either official language. You may be asked questions in French and English. You have translation devices available to you.

Mr. Bélanger, you're here. Why don't we start with you?

[*Translation*]

Mr. Étienne Bélanger (Director, Forestry, Forest Products Association of Canada): Thank you, Mr. Chair.

Good afternoon, members of the committee.

Thank you for inviting me to appear on behalf of the members of the Forest Products Association of Canada, or FPAC.

In short, FPAC provides a voice for Canada's wood, pulp and paper producers nationally and internationally. Canada's forest products industry is a $69 billion a year industry that contributes over $21 billion to Canada's GDP.

The forestry industry is one of the largest employers in Canada. It is active in 600 communities in Canada and directly employees 230,000 Canadians across the country.

I will now talk about forest pests, starting by giving you some background information.

Insects obviously play an essential ecological role in Canadian forests, but in the event of an infestation or serious outbreak, they can destroy important commercial areas. They are then considered pests.

The mountain pine beetle and spruce budworm are long-established pests—more recently in the case of the beetle—that have caused and continue to cause significant economic losses. These impacts have been felt for several decades. It is therefore imperative to take all reasonable measures to mitigate these impacts.

The responsibility for implementing forest pest control measures in Canada depends on where the infestations or outbreaks occur; this responsibility can be provincial, federal or municipal. Eighty-five percent of wood volumes are harvested in public forests. It is therefore primarily the responsibility of provincial governments to implement pest control measures.

However, provincial managers rely on available scientific information and control techniques. The Canadian Forest Service, or CFS, is the country's primary source of scientific and technological support for forest pest control.

The decision-making process based on economic, social and ecological risk assessment is the foundation of the National Forest Pest Management Strategy.

In summary, provincial governments have the primary responsibility for implementing forest pest control measures, while the main roles of the federal government are to conduct research on pest ecology; provide risk assessment expertise; and provide advice to forest managers and develop decision support tools.

FPAC has two recommendations regarding forest pests.

First, the Canadian government should continue to support research on forest pest control strategies to stabilize forest supplies.

Current projections indicate that the risk of disturbance from forest pests will increase significantly over time. Add to this the drought projections and the prediction is that conditions could double the area of fires by the end of the century. All these natural disturbances will put most Canadian forests at high risk.

Informed decision-making on forest management issues must be based on a thorough risk assessment to better assess and compare the likely impacts and cost-effectiveness of the various measures being considered.

As a result, one of the main objectives of any forest pest control strategy should be to stabilize forest supplies in the short, medium and long term.

To this end, research on forest pest control strategies is of fundamental importance and should be further supported very seriously by the federal government.

This research should include the following elements: the risks posed by all forest pests from a systemic perspective, taking into account other elements and disturbances in the ecosystem; response costs, particularly their profitability; the stability of forest supplies in quantity and quality; and they should be part of a long-term perspective, meaning for the duration of the epidemic, from the beginning and during its projected duration.

The second recommendation is that the Canadian government support and participate in a national dialogue on new approaches to sustainable forest management in the context of increasing the severity of natural disturbances and climate change.

Given its origin and magnitude, the mountain pine beetle epidemic is one of the most frequently cited examples of climate change impacts in the world.

● (1205)

Similarly, we are currently experiencing record years for forest fires, and these seem to be part of a "new normal" rather than exceptions.

It is therefore expected that these changes will become more pronounced, and it will be essential for the forest sector to face these challenges, to reinvent itself, in short, to adapt.

However, if we begin to rethink sustainable forest management, it will be crucial to assess the consequences of these changes on key values, such as the recovery of species at risk and the management of our forests in light of natural disturbances.

FPAC is seeking to establish a national dialogue that would bring together a group of high-level decision-makers from industry, governments, indigenous groups, environmental groups, unions, universities and research organizations. The objective of the "Forest Forward" initiative is to build a national consensus on new approaches to sustainable forest management in the context of increasing severity of natural disturbances and climate change.

With regard more specifically to forest pests, such a national dialogue could help to deepen some important issues such as the following.

Would it be appropriate to encourage the intensification of forest management in order to obtain better yields, in quantity and quality, on smaller areas, closer to the mills?

This approach is advocated by Quebec's chief forester, Louis Pelletier, in his recent opinion piece entitled: "Prévisibilité, stabilité et augmentation des possibilités forestières". With regard to pests, on the one hand, focusing silvicultural investments would also allow make it possible to focus the necessary interventions in order to protect forest supplies. On the other hand, these pest intervention strategies, in this context, should be adapted. For example, we know that trees that grow faster are more vulnerable to pests.

Another national dialogue would be relevant to determine how the forest regime can be changed. The question arises as follows: is it still appropriate to regenerate forests harvested with the same species as those present on the site before harvesting? This is currently a legal requirement in most situations. Climatic conditions have already changed and are already affecting the distribution of some tree species in Canada. The trees that are being regenerated today will most likely experience very different climatic conditions when they reach maturity in 40, 50 and 80 years.

So, on the one hand, it would be possible to regenerate the sites with seeds from warmer regions, with different species or a variety of species. But, on the other hand, such changes in forest composition would undoubtedly have significant impacts on the habitats of the animal species that live there, and could make forests more or less vulnerable to pests.

In short, sustainable forest management in the coming decades is likely to be very different from that targeted by existing forest regimes. It seems essential to create more space for dialogue on these issues, so that we can cope with the changes under way.

To find innovative solutions to the problem of forest pests, it will be important to take a holistic approach and reflect on the links between these natural disturbances and the forest ecosystem as a whole, in a changing context.

The forest products sector is a key driver of the Canadian economy. It is imperative that the government put in place measures to promote its stability.

I will be pleased to answer your questions.

Thank you, Mr. Chair.

● (1210)

[*English*]

The Chair: Thank you very much, sir.

Mr. Briand, now it's over to you.

Mr. Richard Briand (Chief Forester, West Fraser Mills Ltd.): Good afternoon.

My name is Richard Briand. I am the Chief Forester for West Fraser's Alberta operations. I'm a registered professional forester in Alberta, with 27 years of experience working in Alberta's forests. I thank you for the opportunity to be here today.

West Fraser is a diversified North American wood products company, with 45 manufacturing facilities in western Canada and the southern United States. Our primary products include lumber, plywood, medium-density fibreboard, laminated veneer lumber, pulp, green energy, newsprint and wood chips.

We've been operating continuously in western Canada since 1955. We invested over $1 billion in our Canadian operations between 2013 and 2017, and continue to invest in 2018. We currently operate 25 mills across 10 communities in Alberta and eight communities in British Columbia. We have over 5,000 direct employees in Canada.

Due to the nature of our business, we operate in smaller communities and are often the primary employer in those communities. Communities such as Fraser Lake, B.C., with a population of 988, and Manning, Alberta, with a population of 1,183, depend on our company for employment, and we take great pride in being a stable, long-term employer.

The primary feedstock for our facilities is coniferous timber, predominantly lodgepole pine trees and white spruce trees. We are committed to sustainable forest management principles and manage for timber and non-timber values in our operating areas.

The current mountain pine beetle infestation in western Canada is having a significant negative impact on our operations. It is killing valuable timber—valuable not just from an economic perspective but also for a wide range of ecological goods and services such as water, wildlife habitat, recreational opportunities and carbon sequestration.

The current mountain pine beetle infestation started in B.C. in 1999 and its effects are still being felt today. The two years of record-breaking wildfires in B.C. in 2017 and 2018 are, in part, a result of this infestation. The trees killed by mountain pine beetles contributed to volatile fire hazard conditions, and those fires threatened thousands of homes and impacted the lives and livelihoods of many residents of B.C.

The salvage of economically viable beetle-killed timber in B.C. is essentially complete, and reductions in timber harvest levels are imminent. This will result in mill closures and job losses.

In 2006 and 2009, significant in-flights of mountain pine beetles into Alberta occurred, resulting in the mountain pine beetle infesting parts of northern Alberta that had never seen the insect before. Prior to 2006, most experts believed that spreading of mountain pine beetles from B.C. into Alberta over the Rocky Mountains would never happen. They also believed that Alberta's colder climate would not be suitable for mountain pine beetle survival. They were wrong.

Immediately upon learning of the mountain pine beetle's spread into Alberta, the Alberta government initiated an aggressive control program and requested that companies alter their harvest plans to focus on susceptible pine. Recognizing the wisdom in this concept, in 2006 West Fraser embraced this new approach to forest management, called the "healthy pine strategy". As a result, the vast majority of our timber harvest in the foothills since 2006 has been in pine-dominated stands, but we have also invested significant resources into direct control of infested stands through single-tree and stand-level operations. In recent years, all of our timber harvest in the west-central region of Alberta has been in stands infested by the mountain pine beetle.

Between 2007 and 2010, the federal government contributed just over $18 million towards control efforts in Alberta. To date, the Alberta government alone has invested over $487 million in direct control efforts. Interestingly, the Saskatchewan government has recognized the potential for spread of the beetle from Alberta into their province, and they have contributed over $5 million to Alberta's control efforts to stop the spread of the beetle into their province.

● (1215)

In terms of pine volume, if the mountain pine beetle breaks through Alberta into Saskatchewan, there are continuous pine types that will allow it to spread across the country to eastern Canada. Pine runs all the way to the east coast. It would be decimating vast tracts of pine forest along its way.

Research is showing that the mountain pine beetle can persist in Jack pine, which means that it can get through the Jack pine and lodgepole pine hybridization zone in northern Alberta and spread east. It is truly a national threat.

As recently as 2013, Jasper National Park had very low levels of mountain pine beetle infestation. However, limited action was taken to control that infestation, and it is now feeding mountain pine beetle into Alberta. The Hinton and Edson region of west-central Alberta was inundated by mountain pine beetle raining in from Jasper National Park at record-breaking levels for over two months. Typically, this would only happen over a two-week period.

The spread of the mountain pine beetle into our operating areas is putting our businesses at risk and will eventually put the very communities we operate in at economical and physical risk from wildfire. Without aggressive control, the mountain pine beetle will spread north and south along the critical watersheds of the east slopes of the Rocky Mountains, and it will also continue its steady march east into Saskatchewan and beyond.

Some of the impacts the outbreak will have on West Fraser include increased fire risk to the forests we depend on. Significant wildfires will reduce the available timber for our forestry operations and, again, put the communities we operate in at risk.

It will also result in the production of lower-value products by feeding dry, beetle-killed logs into our mills rather than fresh, green timber. This reduces the viability of our operations.

There will be increased costs and reduced production at our facilities due to limited forest resource availability. There will be fewer trees available for harvest if the mountain pine beetle has overrun our operating areas. Increased costs for logging and hauling dead timber will also be a result. There will likely be watershed impacts, which can damage our road infrastructure. As well, we will have to invest more into our facilities to be able to handle the dry logs that will be provided to our sawmills.

The situation in B.C. is very troubling but beyond our ability to do much, other than reconcile the remaining forest inventory, consolidate businesses and close some mills.

Due to the proactive and aggressive program in Alberta, we are not in the same situation as B.C. The program is well coordinated with industry and municipalities to ensure that control treatments are aligned, which we certainly appreciate. Resources for this program, however, appear to be tight. We believe that continued support of Alberta's program would be very beneficial.

We believe we need to continue with the aggressive control efforts, and we will also need some help from Mother Nature. Control efforts will slow the spread of the mountain pine beetle and allow government and industry to work together to manage the forests and mitigate the impacts of this pest. Slower spread rates will help maintain the economic viability of the timber resource, which means that we can harvest and then reforest pine beetle-infested stands, which will then support the many values they provide. Left unharvested, many of these areas will not regenerate until a wildfire burns through them.

It is a challenging situation, but through co-operative, coordinated actions we can have a significant impact on the spread of the mountain pine beetle.

Thank you again for the opportunity to present and provide our perspective on the mountain pine beetle.

● (1220)

The Chair: Thank you very much, both of you.

Mr. Serré, you're going to start us off.

[*Translation*]

Mr. Marc Serré (Nickel Belt, Lib.): Thank you, Mr. Chair.

Thank you to the two witnesses for their presentations and the work they are doing in the field.

My first question is for both witnesses, but I will address Mr. Bélanger first.

Your association has members in every province, but the number varies from one to the next.

Has the "cap and trade" system in Quebec helped producers in terms of research and education?

Do you have any examples of the assistance provided under the existing system?

Mr. Étienne Bélanger: I'm sorry. Are you talking about the carbon system?

Mr. Marc Serré: In other words, aren't there research funds that have been given to companies to help them?

Mr. Étienne Bélanger: There is currently a situation in Quebec that is posing a few problems. A lot of research money comes from the federal government through the Natural Sciences and Engineering Research Council, or NSERC.

Unfortunately, under the new forestry regime in place, the province is responsible for forest management. Since 2014, it is no longer the companies that are responsible for making management plans, but the province, which has also taken over responsibility for funding the Société de protection des forêts contre les insectes et maladies, or SOPFIM. SOPFIM is no longer funded by industrial contributions, but by government money in the form of royalties that SOPFIM receives directly, which prevents NSERC from doubling its funds.

This greatly reduces the potential for research on insects and their diseases. The fault lies in this new accounting mechanism. Discussions are under way to rectify the situation, but I know that many financial contributions for insect and disease research are coming to an end in Quebec soon and are difficult to renew because of this accounting mechanism that has been modified in the new forestry regime.

[*English*]

Mr. Marc Serré: Mr. Briand, has the system in Alberta and B.C., with the price on pollution, helped you as a private sector company in terms of research and development to help support the tackling of invasive species in general, not just the mountain beetle?

● (1225)

Mr. Richard Briand: Yes, there's been a lot of funding provided to mountain pine beetle research. Most of that has come from the Alberta government. The Canadian Forest Service has been doing a lot of research as well. I'm not familiar with any linkages back to the carbon taxes or anything related to that.

[*Translation*]

Mr. Marc Serré: The witnesses talked to us about eastern and western Canada.

Mr. Eglinski explained earlier that the mountain pine beetle was getting closer to Ontario. We were also talking about the whole issue of Toronto's Pearson Airport and the urban environment. A crisis seems to be looming on the horizon, but that's not what I'm hearing from you.

Mr. Bélanger, you are talking about recommendations to the federal government. The first recommendation is to invest in research and development, which means more money. It is always difficult to seek money, but it is important. The second recalls the importance of nation-wide education on climate change.

Some witnesses spoke about native species and invasive species. When it comes to jurisdictional issues, it seems that the entire system needs to be disrupted. Municipalities have responsibilities, so does the province, and even the federal government has a small role to play. There doesn't really seem to be a national system. However, an infestation is looming in Canada that will affect the entire country, Ontario, Quebec and cities. However, the recommendations seem to be telling us to continue as before and be optimistic.

I won't be here as a member of Parliament in 2023 to talk about national issues in an industry as important as forestry. I would therefore like to know if it is possible to recommend a more national debate. The provinces are responsible for forest management, but I don't think they seem to want us to be sufficiently involved in this management.

Mr. Étienne Bélanger: Let's not underestimate the importance of a national dialogue. This crisis will require us to look at our forest regimes and the species to be preferred for reforestation, given the increase in these infestations. The discussions will be very upsetting, and will also be difficult in many ways.

Holding these discussions with each province separately is very complicated, which explains the Forest Products Association of Canada's strong interest in establishing a national discussion forum. FPAC is negotiating with many officials and representatives of the Canadian Forest Service to see if it is possible to broaden the scope of some of the national dialogues that primarily affect research and the new vision of the Canadian Council of Forest Ministers.

We anticipate that further, much more intense discussions on these changes will be required. In our view, many of the legal foundations of existing forest regimes do not allow for the necessary changes, particularly in terms of rethinking forest composition. Indeed, the law currently requires reforestation with the same species, and the parameters governing the recovery of species at risk are static. These two constraints force us to claim that we will succeed in restoring forests to their former state, knowing that this will not happen.

So we will have to face a major conflict if we continue to invest in one direction, while the forest has to go in a completely different one, and we will be up against the wall. This change will be very upsetting, and we will wonder how sure we will be of our approach, how ready we will be and on what scale we will be able to implement these political changes. These are big questions. It is indeed difficult to discuss it with each of the provinces separately, just as it would be equally irrelevant—

[*English*]

The Chair: I'm going to have to stop you there. We have to move on. Thank you, Mr. Serré.

Mr. Eglinski, go ahead.

Mr. Jim Eglinski: Thank you, Mr. Chair.

Thank you to both witnesses for appearing here today.

I was listening to your last reply here, Mr. Bélanger, and you mentioned a national strategy four or five times during your answers. I imagine that's what your association is looking for.

Do you believe we are past a dialogue and now require more direct action by the federal government in the way of financial assistance to provinces?

If you look at the presentation by West Fraser, they cited $487 million that the Province of Alberta put in to attack the pine beetle, and $5 million invested by the Province of Saskatchewan, which hasn't really found any yet, whereas the federal government put in $18.37 million. I think that came under our government, towards the end of it, and it was definitely not enough.

Do you think we're at the dialogue stage, or do you think we're at the action stage? Do you think the government needs to be more involved federally? The provinces are already.

● (1230)

Mr. Étienne Bélanger: I would say both. The federal intervention is welcome in terms of creating a capacity to do these rapid interventions in crises, and notably to either help avoid the spread from one province to another, or level the playing field, although that might be a bit of addressing the short-term issue and the rapid crisis. That's great, but if we also maintain a forest management regime that continues to move towards more crises without rethinking itself, that's also something that needs to take place.

Mr. Jim Eglinski: Thank you.

Mr. Briand, it's good to hear from you again. Your company, West Fraser, has been very active in my riding of Yellowhead, especially the Hinton area, in the last several years, watching the pine beetle come through the park. In the last four to five years in particular, you have been very actively working with the provincial and federal governments in trying to cull the beetles as they came out and into the eastern slopes.

Can you give us an example of the kind of job you have done or the kind of work you're doing? You're working with the communities. You have a pine beetle task force there. Can you update us on what type of...? You're the front line. You're attacking them. Give us an idea of what you're doing as a group.

Mr. Richard Briand: There are a number of different approaches or activities we're involved in, the most obvious being our direct control efforts. That's really been a combination of redirecting all of our timber-harvesting operations into beetle-infested stands today, as well as participating in the Government of Alberta's program on controlling individual trees that are in small pockets, scattered across the landscape.

As far back as 2006, we redirected all our efforts into harvesting stands where the beetle would do well if it got established. There's also been a lot of activity in working with the local communities, helping them to understand what is going on, what spread rates we're looking at and where we expect to see the beetle.

A lot of concern from the communities is about whether there's enough coordination happening, for example. There's been a lot of dialogue at every level of government that is interested and that we can spend a few minutes talking to, which is most of them. The municipalities and provincial governments in particular, in this region, have been very active in that regard. We spend a lot of effort there.

There are a lot of costs involved in redirecting, replanning, abandoning current harvest plans and focusing on new areas as the beetle spread progresses.

Mr. Jim Eglinski: What do you think governments—the provinces and the federal government—can do at the present time to assist forest companies like yours, when entire regions are being attacked by the pine beetle? What do you think they can do more of than they are doing now?

● (1235)

Mr. Richard Briand: The control strategy they have in Alberta is a very good one. It just needs as many resources as we can put into it. That's where it will be the most effective. It needs to be funded to its maximum potential. The impression we're getting now is that the resources available provincially are becoming more difficult to find, so anything that can support Alberta's program would be the best step forward. We're not at a point where we—

Mr. Jim Eglinski: I have one quick question, Richard.

You've been on the front lines. Your company has been very active, and I have to compliment West Fraser.

Do you think you were holding them, for a while? Do you think we can hold them? Do you think we can beat them, from your experience?

Mr. Richard Briand: We can slow down their spread. I don't think we can stop them completely with our control efforts, but we can have a significant impact in terms of slowing them down and minimizing the impact on the forests over time. Eventually we're going to get some help from Mother Nature to provide some cold weather at the right time of year, which will really knock them back.

We can be very effective, and research has been done that confirms that Alberta's program, combined with industry and government, is effective.

Mr. Jim Eglinski: Thank you.

The Chair: Mr. Cannings, go ahead.

Mr. Richard Cannings: Thank you both for being here.

I'll start with Mr. Bélanger, with some questioning along the lines of what I was talking about to the previous witnesses.

I'm from British Columbia. British Columbia is in a kind of post-apocalyptic phase for the mountain pine beetle, and looking to the future for ways of preventing this from happening again.

I just want to pick up on a comment you made, which was a bit of a surprise to me, and that was about a legal requirement to plant the same species that you cut. I know that in British Columbia there's a legal requirement, or the province directs companies to cut species in the same proportion that is in their timber supply area, so you can't just go in there and cut nothing but lodgepole pine or Douglas fir. You have to take things in proportion, as I understand it.

However, I didn't know there was a requirement to go back and plant all that. What we see—at least what I see on the land—is a company clear-cutting an area that might have been lodgepole pine-dominated, or half pine and half spruce, and then it's all planted to pine.

I'm wondering if you can let me know what that legal requirement is. Does it change from province to province, or is it across Canada?

Mr. Étienne Bélanger: Yes, it does change from province to province. What is common is that they all require that you bring back the forest "free to grow", so it has to be regenerated when you harvest the area. Typically, there are requirements. You can do that either through natural regeneration or artificially by replanting. Normally, the requirement about what you're allowed to plant will be that you're only allowed to plant seedlings that have grown from seeds from the region.

There are now trials in B.C. to do what they call "assisted migration", where they will be purposely planting trees from a different region, although it's on a trial basis. They created that exception to the rule to allow for these tests to take place, either in changing the species from height or from latitude. Normally, in most regimes, and from what I know, when you plant, you're required to regenerate using the same species from the same region, considering that you might plant only one species but it might become a mixed stand because some other less-desired species will still come and regenerate themselves naturally, such as aspen, for example.

Mr. Richard Cannings: In terms of asking what the federal government's role could be in this regeneration phase, I know that in British Columbia forest companies are required to replant the areas they cut, and by law they keep up with that. It seems, from what I've heard, that the province has fallen behind. With all the fires and the mountain pine beetle kill, there's a real deficit right now in that planting.

I'm wondering if you see this as a place where the federal government could step in and say, "Look, we understand this is a disaster, so here's some disaster relief funding to replant, with some strings attached"—which perhaps might be that there be some attempt to return the forest to a more diverse stand that would be less susceptible. Is this something that FPAC would be behind?

● (1240)

Mr. Étienne Bélanger: Yes, that's something we would be supportive of. We see that weakness in our current forest management approach. Mr. Briand alluded to it. The fact is that we operate on half of one per cent of the forest every year, which gives us a very limited ability, through forestry only, to change the forest composition.

If more funding were created for us to also regenerate some of these stands that are devastated by mountain pine beetle, spruce budworm or fire, and that are not currently regenerating because the trees are still there, blocking some of the regeneration, there would be ways to.... No one is responsible for that at the moment. These forests are waiting. They're either waiting to burn or to fall down after years and years.

These are huge volumes that are not coming back. These are productive and healthy forests that are not coming back or are coming back very slowly. Since there are no legal requirements to address this in the programs that are in place at the moment, that could be a very new, proactive and significant role that the federal or another government could decide to take on, for sure.

Mr. Richard Cannings: I have two minutes, and I'd ask Mr. Briand basically the same question, about how West Fraser decides what to replant with. What are your directives? What constraints are you operating under? How do you make those decisions on what to replant or on how to salvage logs? Let's just stick with the replanting for now.

Mr. Richard Briand: Sure. The replanting is driven almost entirely by the regulations of Alberta. I'll speak to Alberta specifically. We do need to regenerate species: the same species in the same proportions that we harvest. That is in regulation in our regeneration standards today.

There have definitely been some adjustments in those standards to reflect the changing climate in terms of the seed source. That was referred to earlier. Some seeds from lower elevations now can be planted at higher elevations. There have been those kinds of things. In terms of the actual shift to different species, it's something that's been researched and discussed a bit, but there have been no changes in any regulations or guidelines around that.

Mr. Richard Cannings: Is there any favouritism, if you will, that West Fraser might have for pine, which grows faster than spruce, just because you might get a faster return? I don't know how the land tenure is in Alberta versus British Columbia, but....

Mr. Richard Briand: Generally, our approach is driven by the ecosites. There are some sites where pine will grow better, and there are other sites where white spruce will grow better. Our silviculture foresters go out into each cutblock and make an assessment on what will have the best chance of success. It is site-specific.

Mr. Richard Cannings: Thank you.

The Chair: Mr. Cannings, that's your time, but as we talked about, I have to excuse myself a bit early.

Mr. Cannings is going to take the chair for the rest of the meeting.

Mr. Whalen, you're next. I think you're probably the last person up anyway.

Mr. Nick Whalen (St. John's East, Lib.): Thanks, Mr. Chair. Enjoy your next meeting, wherever you're off to.

The first question I have is for the analysts. I'm hoping you can prepare a chart for us just to help us maintain some status here on the facts about federal and provincial expenditures on forest pest management over the past 20 years. It's just so we can see how much the provinces and the federal government have been spending on this topic over time, so we can be grounded in that. I think that would be helpful for us.

[*Translation*]

Mr. Bélanger, other witnesses have talked to us about landscape scale management. Could you explain in a few words what this is about to help the translators, interpreters and the writing of the French version of our report? It would be very helpful to us.

Mr. Étienne Bélanger: Certainly.

The landscape-scale management approach refers to the scale at which we will set our management objectives. One of Canada's unique features, which gives it environmental advantages over many other countries, is that we consider the composition of forests at the landscape level in relation to their historical state. The objective is, for example, to see the landscape evolve according to its forests, to see if the 50-year management has led us to younger forests through the elimination of white pine, or to determine the type of forest that can be recreated that would be more representative of a natural landscape across the country. This is often referred to as the ecosystem approach.

● (1245)

Mr. Nick Whalen: Right. I've heard those terms before.

When we talk

[*English*]

about this ecosystem-wide management.... Now that we have some verbs and whatnot for the translators, I'll go back to English. It's a lot easier for you.

What type of experimentation remains to be done to determine whether planting or just burning the existing stands, or another type of approach, is best for the environment from a landscape management perspective? What could be done to determine which is best? Is this something that scientists understand well, or is it something that we need to experiment on to determine?

Mr. Étienne Bélanger: It is something that is continuously studied. I think we have a very good understanding of what we're doing, but our understanding keeps improving. Tests can continue, but what gets valued on the land and what we as a society decide to focus on also change over time. Achieving these evolving objectives also requires continuous research to see if it's going to work.

For example, nowadays, trying to help woodland caribou recover is a top issue. There's a variety of approaches being tested now to see how it can be achieved. That requires quite a bit of research, because you can't rely only on a baseline hypothesis and apply it across the full landscape in the hope that it's going to work in each case. You need to continuously research your management approaches to test whether or not they are meeting the objective. That's both in terms of research and in terms of maintaining systems of continuous learning in place.

Mr. Nick Whalen: When I look at the severe challenge facing us, not just with the spread of forest pests, but also with managing the risks associated with the dead stands that exist both in Quebec, with regard to the spruce budworm, and in B.C., with the mountain pine beetle, does it present an opportunity for forest management scientists, but also the provinces and perhaps companies, to develop standards by which these stands can be harvested? Some economic value, perhaps, in a subsidized way, can be extracted to reduce the overall forest fire risk, because it seems that this is a major concern, not only for the loss of people's homes and property but also for the loss of life for firefighters and in terms of their risks.

Can we more proactively manage these dead stands in a way that can allow for their more rapid regeneration, perhaps by controlled burning in some fashion, at least so that if a forest fire develops in a particular area we've done the necessary preparatory work so that firefighters can access and protect the neighbouring communities in a more efficient fashion?

I'm hoping to get answers from both parties.

Mr. Étienne Bélanger: I can start.

I would say yes, but not only because the efforts to salvage dead stands are very significant. That should probably not be the only avenue to address the issue that I think you're getting at.

In some provinces, they're getting almost their full wood supply through salvage harvest in the current context, so it's hard to do more on that front, but also, in evolving our forest management strategies and how you do harvests in more normal circumstances, you could have the objective of creating a forest structure that is less prone to burn, or replacing some more intense forest management activities closer to communities, or redesigning your roads to help with fire management in the future.

Our forestry has not been taught in the first place to design forest intervention for dealing with future burn stands or future invasion. If you were to take these objectives now as being more important than they used to be, it could change how we manage our forests on a landscape basis.

● (1250)

Mr. Nick Whalen: Mr. Briand, it's easy enough for people in Ottawa or even for academics, but it's your company and your employees that would ultimately be tasked or procured to implement any recommendation for large-scale landscape management techniques.

Do you have any particular views? If you were just going to engage in some blue-sky thinking or some brainstorming around this, where do you think the industry should be going?

The Vice-Chair (Mr. Richard Cannings (South Okanagan—West Kootenay, NDP)): He has 10 seconds, so you might want to stop talking and let him speak for 10 seconds.

Voices: Oh, oh!

Mr. Nick Whalen: Thanks, Richard.

Mr. Richard Briand: Briefly, my response would be that we do a lot of research around trying to replicate natural disturbance patterns, based predominantly on historical fires. We continue to work on it to try to see how those are going to evolve over time in a changing climate.

The Vice-Chair (Mr. Richard Cannings): That brings us to the end of the first round.

I suggest that we end things there, unless it's the will of the committee to give five minutes to the Conservative side. We can just thank the witnesses and call it a day.

Mr. Eglinski, go ahead.

Mr. Jim Eglinski: Mr. Chair, I would love to give him a few more minutes to let him finish on the question that Mr. Whalen was asking. Ten seconds wasn't very long, and I think we would all be willing to listen to that answer.

The Vice-Chair (Mr. Richard Cannings): Okay. Thank you.

Mr. Nick Whalen: I think Mr. Briand got my question. He just didn't get a full opportunity to answer.

Maybe you can elaborate, Mr. Briand, on how your company can assist the government in developing recommendations to do landscape management, and also on the role your company already plays and what further role your company can play in helping us manage the forest fire risk in the future.

Mr. Richard Briand: As I was mentioning, we already study a fair bit around how the natural cycles would affect the patterns of the forest in the areas we manage. They vary a lot from region to region, so we need to understand the specifics. There's no one-size-fits-all solution. There are different parts of the province, even within Alberta, where those strategies may be different.

Incorporating and recognizing the forest fuel types that are generated through your activities—fuel from a fire perspective—and modelling those over time to see if there are treatments we can do that would create larger landscape-level breaks is something that we have been talking about more and more. We are definitely interested in pursuing those.

Again, the opportunity is more obvious in some places than in others, but I can say that we've been putting in a lot of effort, and different provinces across the country have been expending a lot of effort around communities in recognizing those fire risks and the fuels around the communities to help them be less prone to these fires rolling through.

The Vice-Chair (Mr. Richard Cannings): Okay, thank you very much.

I'd like to thank Mr. Briand and Monsieur Bélanger for coming before us today.

With that, the meeting is adjourned. See you all next week.

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